

What is claimed is:

1. A method for determining plastic components of a blended plastic material, the method comprising:

accessing supply data describing characteristics of each of a plurality of plastic components;

receiving specification data identifying at least one desired characteristic of the blended plastic material;

processing the supply data and the specification data to determine combinations of certain of the plastic components that may produce the blended plastic material having the at least one desired characteristic;

determining, for each combination, a preferred percentage of each of the plastic components of the combination; and

reporting the combinations and preferred percentages.

2. The method of claim 1, wherein the supply data includes a cost associated with each plastic component.

3. The method of claim 2, wherein the step of determining is based on a total cost of the blended plastic material produced by the combination, the total cost being the sum of the percentage cost of each plastic component of the combination, the percentage cost of each plastic component of the combination being the cost of the plastic component multiplied by the preferred percentage of the plastic component.

4. The method of claim 1, wherein the at least one characteristic of the blended plastic material includes a characteristic reflecting a physical property of the blended plastic material.

5. The method of claim 4, wherein the at least one characteristic is a physical property relating to density.

6. The method of claim 4, wherein the at least one characteristic is a grade characteristic.

7. The method of claim 1, wherein reporting the combinations and preferred percentages includes sorting the combinations according to a cost associated with each combination.
8. The method of claim 1, further including determining, for each combination, a set of alternative percentages associated with the plastic components of the combination.
9. The method of claim 1 wherein the determined combinations include a predetermined number of plastic components.
10. The method of claim 1 wherein the determined components include a number of plastic components within a predetermined range.
11. The method of claim 1, wherein the percentage of each plastic component of each combination falls within a predetermined range.
12. The method of claim 1, wherein the supply data includes an indicator of available volume for each plastic component, the method further including determining a maximum volume of the blended plastic based on the available volume and percentage of each plastic component.
13. The method of claim 1, wherein the specification data includes a range of values associated with one characteristic.
14. The method of claim 13, wherein the specification data includes a minimum value and a maximum value representing the range.
15. The method of claim 13, wherein the specification data includes a target value and at least one offset value.
16. The method of claim 1, wherein the method is performed on a single computer.

17. The method of claim 1, wherein the steps of processing and determining are performed on a remote computer.

18. The method of claim 1, further comprising:

determining that no combination of the plastic components produces a blended plastic material having the at least one desired characteristic; and

processing the supply data and the specification data to determine at least one combination of certain of the plastic components that produce a blended plastic material having a characteristic approximating the at least one desired characteristic; and;

determining, for the at least one combination, a preferred percentage of each of the plastic components of the combination.

19. The method of claim 1, wherein the supply data includes data describing at least one additive which may be used in a manufacturing process; and wherein the step of processing includes processing the supply data describing the at least one additive.

20. The method of claim 1, wherein the supply data includes data describing at least one enhancer which may be included in the blended plastic material; and wherein the step of processing includes the supply data describing the at least one additive.

21. The method of claim 1, wherein the supply data includes data describing at least one filler which may be included in the blended plastic material; and wherein the step of processing includes the supply data describing the at least one filler.

22. The method of claim 1, further including

receiving feedback data from a production monitor;

calibrating the preferred percentages based on the feedback data to more closely match the blended plastic material to the specification data; and

transmitting the preferred percentages to a resin blender.

23. The method of claim 1, further including:

receiving a selection of a desired blended plastic material; and

transmitting the selection to an inventory management application.

24. The method of claim 1, further including:

receiving target blended plastic material data defining the plastic components and percentages of a target blended plastic material; and

wherein the step of determining includes calculating comparative cost data associated with each of the combinations and preferred percentages to be reported based on the target blended plastic material data.

25. A method for determining at least one plastic component of a blended plastic material, the method comprising:

accessing supply data describing characteristics of each of a plurality of plastic components; receiving specification data identifying at least one desired characteristic of the blended plastic material;

receiving presumed plastic component data identifying at least one plastic component presumed to be included in the blended plastic material;

processing the supply data, the presumed plastic component data and the specification data to determine combinations of one or more plastic components that may be combined with the presumed components identified by the presumed plastic component data to produce the blended plastic material having the at least one desired characteristic;

determining, for each combination, a preferred percentage of each of the plastic components of the combination and the cost for each combination; and

reporting the combinations and preferred percentages.

26. The method of claim 24, wherein the step of processing determines a plastic component according to at least one characteristic.

27. The method of claim 25, wherein the step of processing determines a plastic component which is not described by the supply data.

28. The method of claim 24, wherein the supply data is an external store of data.

29. The method of claim 24, wherein the accessed supply data is a subset of a larger store of supply data.

30. An apparatus method for determining plastic components of a blended plastic material, the apparatus comprising:

a processor; and

a memory operatively connected to the processor, said memory storing:

supply data describing characteristics of each of a plurality of plastic components;
specification data identifying at least one desired characteristic of the blended

plastic material; and

control logic for directing the processor to:

process the supply data and the specification data to determine combinations of certain of the plastic components that may produce the blended plastic material having the at least one desired characteristic;

determine, for each combination, a preferred percentage of each of the plastic components of the combination; and

report the combinations and preferred percentages.

31. An apparatus method for determining at least one plastic component of a blended plastic material, the apparatus comprising:

a processor; and

a memory operatively connected to the processor, said memory storing:

supply data describing characteristics of each of a plurality of plastic components;
specification data identifying at least one desired characteristic of the blended

plastic material;

presumed plastic component data identifying at least one plastic component presumed to be included in the blended plastic material; and

control logic for directing the processor to:

process the supply data, the presumed plastic component data and the specification data to determine combinations of one or more plastic components that may be

combined with the presumed components identified by the presumed plastic component data to produce the blended plastic material having the at least one desired characteristic;;

determine, for each combination, a preferred percentage of each of the plastic components of the combination and the cost for each combination; and

report the combinations and preferred percentages.

32. A computer-readable storage medium encoded with processing instructions for determining at plastic components of a blended plastic material, the processing instructions for directing a computer to perform the steps of:

accessing supply data describing characteristics of each of a plurality of plastic components;

receiving specification data identifying at least one desired characteristic of the blended plastic material;

processing the supply data and the specification data to determine combinations of certain of the plastic components that may produce the blended plastic material having the at least one desired characteristic;

determining, for each combination, a preferred percentage of each of the plastic components of the combination; and

reporting the combinations and preferred percentages.

33. A computer-readable storage medium encoded with processing instructions for determining at least one plastic component of a blended plastic material, the processing instructions for directing a computer to perform the steps of:

accessing supply data describing characteristics of each of a plurality of plastic components; receiving specification data identifying at least one desired characteristic of the blended plastic material;

receiving presumed plastic component data identifying at least one plastic component presumed to be included in the blended plastic material;

processing the supply data, the presumed plastic component data and the specification data to determine combinations of one or more plastic components that may be combined with

the presumed components identified by the presumed plastic component data to produce the blended plastic material having the at least one desired characteristic; and;

determining, for each combination, a preferred percentage of each of the plastic components of the combination and the cost for each combination; and

reporting the combinations and preferred percentages.